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10/679,353	10/07/2003	Takayuki Ito	26A-011	3849

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EXAMINER	
STAICOVICI, STEFAN	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

10/

Office Action Summary	**Application No.** 10/679,353	**Applicant(s)** ITO ET AL.	
	Examiner Stefan Staicovici	**Art Unit** 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *10/07/03*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the abstract should not refer to purported merits or speculative applications of the invention. It is suggested that the last sentence be deleted in its entirety. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, line 3, the limitation of "ordinary temperature" is unclear as to what Applicants consider to be "ordinary." Further clarification is required. Claim 11 is rejected as a dependent claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for

> patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-4, 7, 9 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Naritomi *et al.* (US 2004/0062943 A1).

Naritomi *et al.* (US 2004/0062943 A1) teach the claimed process of making an insert molded product including, machining an insert member, cleaning said insert member of coolant (machine assistant) and cuttings (swarf) using a cleaning agent, rinsing said insert member with water to remove said cleaning agent, drying said insert member, placing said insert member in a mold and injection molding a thermoplastic resin about said insert to form said insert molded product (see paragraphs [0018], [0023]-[0024] and [0062]).

Regarding claim 7, Naritomi *et al.* (US 2004/0062943 A1) teach a cleaning agent that is an organic solvent. It is submitted that an organic solvent will dissolve an adhesive component in order for cleaning to occur and as such, for the invention of Naritomi *et al.* (US 2004/0062943 A1) to function as described (see paragraph [0023]).

In regard to claim 9, Naritomi *et al.* (US 2004/0062943 A1) teach the use of water to remove said cleaning agent, hence it is submitted that said cleaning agent has a high affinity for water in order to be removed as described by Naritomi *et al.* (US 2004/0062943 A1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naritomi *et al.* (US 2004/0062943 A1) in view of Ruble, III (US Patent No. 5,956,925).

Naritomi *et al.* (US 2004/0062943 A1) teach the basic claimed process as described above.

Regarding claims 5-6, although Naritomi *et al.* (US 2004/0062943 A1) teach spraying a cleaning agent (see paragraph [0046]), Naritomi *et al.* (US 2004/0062943 A1) do not teach injecting said cleaning agent from a plurality of nozzles arranged about said insert member. However, the use of a plurality of cleaning nozzles placed about a part to be cleaned that inject cleaning agent is well known as evidenced by Ruble, III ('925) who teaches a system for cleaning a component including, providing a plurality of nozzles positioned about a component (positioned above and below) to be cleaned and injecting a cleaning agent through said nozzles (see col. 5, line 55 through col. 6, line 10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a cleaning system including a plurality of jets as taught by Ruble, III ('925) to inject a cleaning agent in the process of Naritomi *et al.* (US 2004/0062943 A1) because of known advantages such as increased cleaning action and also because, Naritomi *et al.* (US 2004/0062943 A1) teach spraying a cleaning agent (see paragraph [0046]) hence requiring the use of a cleaning system in order to function as described.

In regard to claim 8, because Naritomi *et al.* (US 2004/0062943 A1) teach spraying a cleaning agent, whereas Naritomi *et al.* (US 2004/0062943 A1) in view of Ruble, III ('925) teach injecting a cleaning agent, it is submitted that said cleaning agent is sprayed or injected at a predetermined pressure in order for spraying or injection to occur.

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naritomi *et al.* (US 2004/0062943 A1) in view of Tuominen (US Patent No. 5,051,136).

Naritomi *et al.* (US 2004/0062943 A1) teach the basic claimed process as described above.

Regarding claims 10-11, although Naritomi *et al.* (US 2004/0062943 A1) teach using water as part of the cleaning process, Naritomi *et al.* (US 2004/0062943 A1) do not teach providing steam. Tuominen ('136) teach a cleaning process including, providing steam for cleaning after a rinsing step using water (see Abstract). It is submitted that steam is at a temperature that is higher than room temperature (ordinary temperature). Therefore, it would have been obvious for one of ordinary skill in the art to have provided steam as a cleaning agent as taught by Tuominen ('136) in the process of Naritomi *et al.* (US 2004/0062943 A1) because Tuominen ('136) specifically teaches that steam provides for an improved cleaning agent by reducing the use of solvents, eliminating the need of a drying step, hence providing for an improved cleaning process.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naritomi *et al.* (US 2004/0062943 A1) in view of JP 2746024.

Naritomi *et al.* (US 2004/0062943 A1) teach the basic claimed process as described above.

Regarding claim 2, although Naritomi *et al.* (US 2004/0062943 A1) teach injection molding a thermoplastic resin about said insert to form said insert molded product, Naritomi *et al.* (US 2004/0062943 A1) do not teach injecting a molding assistant material and boiling said molding assistant material to form a coating on the surface of the cavity. JP 2746024 teaches a process for making a steering wheel including, providing a core, placing said core in a mold, lowering the pressure in said mold, injecting a mold coating solution, bringing said mold coating solution to a boil such that a coating is formed onto said mold, injecting a urethane resin to form said steering wheel. Therefore, it would have been obvious for one of ordinary skill in the art to have injected a molding assistant material and boiled said molding assistant material as taught by JP 2746024 to form a coating onto the mold in the process of Naritomi *et al.* (US 2004/0062943 A1) because of known advantages such as improved aesthetics and improved productivity by allowing simultaneous coating and molding of said insert molded product.

10. Claims 1-4, 7, 9 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of Naritomi *et al.* (US 2004/0062943 A1).

APA teaches the basic claimed process for making an insert molded product including, providing a core, placing said core in a mold, lowering the pressure in said mold, injecting a mold coating solution, bringing said mold coating solution to a boil such that a coating is formed onto said mold and injecting a resin to form said insert molded product (see page 1, line 29 through page 2, line 3 of the original disclosure).

Regarding claims 1, 3-4 and 13, APA does not teach cleaning the core prior to insert molding. However, cleaning a preform (insert/core) prior to molding is well known as evidenced by Naritomi *et al.* (US 2004/0062943 A1) who teach a process of making an insert molded product including, machining an insert member, cleaning said insert member of coolant (machine assistant) and cuttings (swarf) using a cleaning agent, rinsing said insert member with water to remove said cleaning agent, drying said insert member, placing said insert member in a mold and injection molding a thermoplastic resin about said insert to form said insert molded product (see paragraphs [0018], [0023]-[0024] and [0062]). Therefore, it would have been obvious for one of ordinary skill in the art to have cleaned the core/insert as taught by Naritomi *et al.* (US 2004/0062943 A1) prior to molding in the process of APA because of known advantages that cleaning provides such as improved adhesion between the core and the injected resin material, improved mechanical characteristics, reduced corrosion and improved aesthetics by reducing air bubbles and blemishes.

In regard to claim 2, APA teaches lowering the pressure in said mold, injecting a mold coating solution, bringing said mold coating solution to a boil such that a coating is formed onto said mold and then injecting a resin to form said insert molded product (see page 1, line 29 through page 2, line 3 of the original disclosure).

Specifically regarding claim 7, Naritomi *et al.* (US 2004/0062943 A1) teach a cleaning agent that is an organic solvent. It is submitted that an organic solvent will dissolve an adhesive component in order for cleaning to occur and as such, for the invention of APA in view of Naritomi *et al.* (US 2004/0062943 A1) to function as described (see paragraph [0023]). Therefore, it would have been obvious for one of ordinary skill in the art to have cleaned the core/insert using an organic solvent as taught by Naritomi *et al.* (US 2004/0062943 A1) prior to molding in the process of APA because of known advantages that cleaning provides such as improved adhesion between the core and the injected resin material, improved mechanical characteristics, reduced corrosion and improved aesthetics by reducing air bubbles and blemishes.

Regarding claim 9, Naritomi *et al.* (US 2004/0062943 A1) teach the use of water to remove said cleaning agent, hence it is submitted that said cleaning agent has a high affinity for water in order to be removed as described by Naritomi *et al.* (US 2004/0062943 A1) and for the invention of APA in view of Naritomi *et al.* (US 2004/0062943 A1) to function asdescribed. Therefore, it would have been obvious for one of ordinary skill in the art to have removed the cleaning agent using water as taught by Naritomi *et al.* (US 2004/0062943 A1) prior to molding in the process of APA because of known advantages that cleaning provides such as improved adhesion between the core and the injected resin material, improved mechanical characteristics, reduced corrosion and improved aesthetics by reducing air bubbles and blemishes.

In regard to claim 12, APA teaches that the core is for a vehicle steering wheel (see page 1, lines 17-19 of the original disclosure).

Claims 5-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of Naritomi *et al.* (US 2004/0062943 A1) and in further view of Ruble, III (US Patent No. 5,956,925).

APA in view of Naritomi *et al.* (US 2004/0062943 A1) teaches the basic claimed process as described above.

Regarding claims 5-6, although Naritomi *et al.* (US 2004/0062943 A1) teach spraying a cleaning agent (see paragraph [0046]), Naritomi *et al.* (US 2004/0062943 A1) do not teach injecting said cleaning agent from a plurality of nozzles arranged about said insert member. However, the use of a plurality of cleaning nozzles placed about a part to be cleaned that inject cleaning agent is well known as evidenced by Ruble, III ('925) who teaches a system for cleaning a component including, providing a plurality of nozzles positioned about a component (positioned above and below) to be cleaned and injecting a cleaning agent through said nozzles (see col. 5, line 55 through col. 6, line 10). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a cleaning system including a plurality of jets as taught by Ruble, III ('925) to inject a cleaning agent in the process of APA in view of Naritomi *et al.* (US 2004/0062943 A1) because of known advantages such as increased cleaning action and also because, Naritomi *et al.* (US 2004/0062943 A1) teach spraying a cleaning agent (see paragraph [0046]) hence requiring the use of a cleaning system in order to function as described.

In regard to claim 8, because Naritomi *et al.* (US 2004/0062943 A1) teach spraying a cleaning agent, whereas Naritomi *et al.* (US 2004/0062943 A1) in view of Ruble, III ('925) teach injecting a cleaning agent, it is submitted that said cleaning agent is sprayed or injected at a predetermined pressure in the process of APA in view of Naritomi *et al.* (US 2004/0062943 A1) and in further view of Ruble, III ('925) in order for spraying or injection to occur as described.

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (APA) in view of Naritomi *et al.* (US 2004/0062943 A1) and in further view of Tuominen ('136) (US Patent No. 5,051,136).

APA in view of Naritomi *et al.* (US 2004/0062943 A1) teaches the basic claimed process as described above.

Regarding claims 10-11, although APA in view of Naritomi *et al.* (US 2004/0062943 A1) teach using water as part of the cleaning process, APA in view of Naritomi *et al.* (US 2004/0062943 A1) do not teach providing steam. Tuominen ('136) teach a cleaning process including, providing steam for cleaning after a rinsing step using water (see Abstract). It is submitted that steam is at a temperature that is higher than room temperature (ordinary temperature). Therefore, it would have been obvious for one of ordinary skill in the art to have provided steam as a cleaning agent as taught by Tuominen ('136) in the process of APA in view of Naritomi *et al.* (US 2004/0062943 A1) because Tuominen ('136) specifically teaches that steam provides for an improved cleaning agent by reducing the use of solvents, eliminating the need of a drying step, hence providing for an improved cleaning process.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD
Stefan Staicovici 2/2/06
Primary Examiner

AU 1732

February 2, 2006